

**UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98055-4056**

In the matter of the petition of

**BOEING COMMERCIAL AIRPLANE
GROUP**

for an exemption from § 25.809(f) of the
Federal Aviation Regulations

Regulatory Docket No. 010NM

GRANT OF EXEMPTION

By letters B-T113-96-4246 and B-T113-97-0037, dated December 19, 1996, and January 6, 1997, respectively, Mr. K. B. Buchanan, Manager, Certification, Delivery & Fleet Support, B-T113, Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207, petitioned for exemption from both the passenger escape slide requirements of § 25.809(f)(1), as amended by Amendment 25-34, and from the requirements specified in Exemption No. 4808 for a rope as the escape means at the entry door on the Boeing Model 757-200PF freighter airplane, to permit the installation of inertia reels and harnesses for each occupant.

Sections of the FAR affected:

Section 25.809(f)(1), as amended by Amendment 25-34, requires a self-supporting slide, or equivalent, of certain specified characteristics at applicable passenger emergency exits, to assist occupants in descending to the ground.

Related Sections of the FAR

Section 25.809(f)(2), as amended by Amendment 25-34, requires a rope or other equivalent means of certain characteristics demonstrated to be suitable for the purpose at flightcrew emergency exits, as assist means in descending to the ground.

(The above 757-200PF certification requirements of § 25.809(f)(1) and (2) are currently found in § 25.810(a)(1) and (2), respectively.)

Section 121.583(a) contains, in pertinent part, a listing of categories of people who may be carried aboard an airplane in part 121 service without complying with all of the passenger-carrying airplane requirements of part 121.

The petitioner's supportive information is as follows:

Boeing hereby petitions for exemption from § 25.809(f), as amended by Amendment 25-34, to permit the use of inertia reel descent devices and harnesses for emergency evacuation at the crew entry door on the model 757-200PF (Package Freighter) airplane. This exemption, in conjunction with Exemption No. 4808, will allow the carriage of five supernumeraries in addition to two crewmembers on the 757-200PF flightdeck, with either inertia reels and harnesses or an escape rope installed as the emergency descent device at the crew entry door. The inertia reel descent devices and harnesses and their function are identical to the inertia reel descent devices and harnesses used for the 767-300F crew entry door. One inertia reel and harness will be provided for each of the seven flightdeck occupants.

The carriage of supernumeraries has been permitted on both the 757-200PF and 767-300F airplanes. On both airplanes, the escape routes and procedures are similar, but the means of emergency evacuation at the crew entry door is different. Exemption No. 4808 in pertinent part allows an escape rope in lieu of an escape slide at the crew entry door of the 757-200PF. Exemption No. 5993A, on the other hand, in pertinent part allows inertia reel descent devices and harnesses in lieu of an escape slide at the crew entry door of the 767-300F. Incorporating inertial reel descent devices and harnesses on the 757-200PF will provide a means of emergency egress at the crew entry door which is common to that of the 767-300F.

The FAA concluded in Exemption No. 5993A that for an application of this nature, inertia reels and harnesses provide at least an equivalent level of safety to that provided by an escape slide. This petition is responsive to a subsequent FAA request that Boeing incorporate inertia reels for use in emergency evacuation on the 757-200PF airplane.

Granting this petition for exemption will provide an alternative means of egress at the 757-200PF crew entry door, as well as improve safety of cargo airplanes, by providing common escape procedures for carriers operating both 757-200PF and 767-300F airplanes.

As with the 767-300F, 757-200PF operators who incorporate inertia reel descent devices may retain the escape rope at the crew entry door. For these operators, the flight manuals and placards will be revised to identify the rope as a “re-entry rope.” The “re-entry rope” is intended as a means of exiting and entering the airplane when the airplane is in remote locations.”

A summary of Boeing's petition for reconsideration was published in the Federal Register on February 19, 1997 (62 FR 7492). No comments were received.

The FAA's analysis/summary is as follows:

The petitioner requests that Exemption No. 4808 be amended to permit the use of inertia reels and harnesses for each occupant of a 757-200PF airplane, either in lieu of, or in addition to, the escape rope at the crew entry door as permitted by Exemption No. 4808. The FAA considers the petitioner's proposal to be in the public interest for the same reasons as those discussed in Exemption No. 4808, and to provide a level of safety equal to or better than the escape rope currently permitted by that exemption.

The issue of whether an escape rope for trained supernumeraries provides an acceptable alternative to the escape slides required for passengers by § 25.809(f) is discussed in some length in Exemption No. 4808. Similarly, the issue of whether inertia reels and harnesses provide an acceptable alternative to the escape slide is discussed in more detail in another exemption, No. 5993A, which was granted to the petitioner for Boeing 767-300PF airplanes. Basically, the FAA recognizes that supernumerary occupants, as opposed to passengers, may be selected and trained appropriately in the use of inertia reels and harnesses. For such occupants, both ambulatory and incapacitated, the FAA considers that inertia reels and harnesses offer an acceptable escape means of emergency egress.

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not adversely affect the level of safety provided either by the regulations or by Exemption No. 4808. Therefore, pursuant to the authority contained in §§ 313(a) and 601(c) of the Federal Aviation Act of 1958, delegated to me by the Administrator (14 CFR 11.53), Boeing Commercial Airplane Group is hereby granted an exemption from § 25.809(f)(1) of the Federal Aviation Regulations. The petition is granted to the extent required to permit type certification of the Boeing model 757-200PF freighter airplane with an inertial reel and harness as the assist means of escape from the crew entry door, for each occupant of the airplane. This escape means may be provided in lieu of, or in

addition to, any previously provided escape rope at the crew entry door. This grant is subject to the following conditions:

1. In accordance with FAA-approved test plan(s), the intended inertia reels and harnesses must be demonstrated to be a suitable assist means for the expeditious and safe evacuation of the maximum number of trained occupants allowed by approved seating. This/these demonstration(s) should also address to the satisfaction of the FAA the capability of trained occupants to utilize the intended inertial reels and harnesses to safely and expeditiously evacuate incapacitated occupants. Additionally, this/these demonstration(s) should also address to the satisfaction of the FAA the suitability of the intended devices from both high and low sill heights representative of § 25.809(f)(1)(iii) gear-collapse conditions.

2. The training and procedures associated with the emergency evacuation demonstration(s) conducted as described above, as found to be acceptable by the FAA, shall be those that are subsequently incorporated into FAA-approved operator's procedures. Any deviation from this condition of the grant requires a fully coordinated approval from this office of the FAA.

3. All occupants of affected 757-200PF airplanes shall receive initial and recurrent training, in accordance with the procedures noted above, in the use of the intended inertial reels and harnesses, including for the evacuation of incapacitated occupants.

Other provisions of Exemption No. 4808, together with its conditions and limitations, remain the same and are applicable to this exemption. This amendment is part of, and shall remain attached to, Exemption No. 4808.

Issued in Renton, Washington, on

James V. Devany
Acting Manager,
Transport Airplane Directorate
Aircraft Certification Service, ANM-100

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